

## Test Conversations (5)

- 1) <https://www.allrecipes.com/recipe/218091/classic-and-simple-meat-lasagna/>

Welcome to the Recipe Assistant!

Please enter a recipe URL:

<https://www.allrecipes.com/recipe/218091/classic-and-simple-meat-lasagna/>

Parsing recipe...

Successfully parsed recipe with 12 ingredients and 6 steps!

Initializing AI assistant...

You can now ask questions about the recipe.

Try: 'start' to begin walkthrough, 'next', 'back', 'repeat', or ask any question!

Type 'quit', 'exit', or 'q' to exit.

Your question: start

Thinking...

Step 1: Preheat the oven to 350 degrees F (175 degrees C).

You can say 'next', 'back', or ask questions.

Your question: how long should I preheat the oven for generally

Thinking...

The recipe doesn't specify a preheating time, but generally, you'll want to preheat your oven until the indicator light or tone signals that it has reached the set temperature. This usually takes about 10-15 minutes.

What would you like to do next? ('next', 'back', or ask questions)

Your question: skip to the final step

Thinking...

Step 7: Allow to stand at least 10 minutes before serving.

You can say 'next', 'back', or ask questions.

Your question: q

Goodbye!

2) <https://www.allrecipes.com/recipe/218091/classic-and-simple-meat-lasagna/>

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Type 'quit', 'exit', or 'q' to exit.

=====

Your question: start

Thinking...

Step 1: Preheat the oven to 350 degrees F (175 degrees C).

You can say 'next' to continue, 'back' to go to the previous step, or ask me any questions you might have.

Your question: next

Thinking...

Step 2: Bring a large pot of lightly salted water to a boil. Add lasagna noodles and cook for 10 minutes or until al dente; drain.

You can say 'next' to continue, 'back' to go to the previous step, or ask me any questions you might have.

Your question: next

Thinking...

Step 3: Meanwhile, place ground beef, garlic, oregano, garlic powder, salt, and black pepper in a large skillet over medium heat; cook and stir until beef is crumbly and evenly browned, about 10 minutes.

You can say 'next' to continue, 'back' to go to the previous step, or ask me any questions you might have.

Your question: how do I know that the beef is crumbly and browned enough. What does it look like exactly

Thinking...

The beef is crumbly and browned enough when it is no longer pink and has broken into small pieces. You'll see a uniform brown color throughout the ground beef.

Your question: how do I know right before its burnt

Thinking...

You'll know the beef is getting close to being burnt if you see parts of it starting to stick to the bottom of the pan excessively or if it starts to look very dry and dark brown, almost black, in some areas. It's also good to keep an eye out for any excessive smoking. The goal is a nice even brown.

Your question: skip to the final step

Thinking...

Step 7: Allow to stand at least 10 minutes before serving.

You can say 'next' to continue, 'back' to go to the previous step, or ask me any questions you might have.

Your question: q

Goodbye!

3)

<https://www.allrecipes.com/recipe/19511/smoked-salmon-sushi-roll/>

Welcome to the Recipe Assistant!

=====

Please enter a recipe URL: <https://www.allrecipes.com/recipe/19511/smoked-salmon-sushi-roll/>

Parsing recipe...

Successfully parsed recipe with 7 ingredients and 4 steps!

Initializing AI assistant...

=====

You can now ask questions about the recipe.

Try: 'start' to begin walkthrough, 'next', 'back', 'repeat', or ask any question!

Type 'quit', 'exit', or 'q' to exit.

=====

Your question: start

Thinking...

Step 1: Soak the rice for 4 hours.

You can say 'next' to move to the next step, 'back' to go to the previous step, or ask me any questions.

Your question: next

Thinking...

Step 2: Drain the rice.

Step 3: Cook the drained rice in a rice cooker with 2 cups of water.

You can say 'next' to move to the next step, 'back' to go to the previous step, or ask me any questions.

Your question: next

Thinking...

Step 4: Immediately after the rice is cooked, mix in the rice wine vinegar.

Step 5: Spread the rice on a plate until completely cool.

You can say 'next' to move to the next step, 'back' to go to the previous step, or ask me any questions.

Your question: next

Thinking...

Step 6: Place 1 sheet of seaweed on a bamboo mat.

Step 7: Press a thin layer of cool rice on the seaweed, leaving at least a 1/2 inch top and bottom edge of the seaweed uncovered.

You can say 'next' to move to the next step, 'back' to go to the previous step, or ask me any questions.

Your question: next

Thinking...

Step 8: Dot some wasabi on the rice.

Step 9: Arrange smoked salmon, cucumber, and avocado on the rice about 1 inch away from the bottom edge of the seaweed.

You can say 'next' to move to the next step, 'back' to go to the previous step, or ask me any questions.

Your question: next

Thinking...

Step 10: Slightly wet the top edge of the seaweed.

Step 11: Roll up tightly from the bottom to the top edge with the help of the bamboo mat. Cut salmon roll into 8 equal pieces and serve. Repeat for other rolls.

You can say 'next' to move to the next step, 'back' to go to the previous step, or ask me any questions.

Your question: what tools are in step 11

Thinking...

Step 11 mentions using a bamboo mat to help roll the sushi.

Your question: quit

Goodbye!

4) <https://www.serious eats.com/pecan-pie-cheesecake-recipe-11843450>

i)

Please enter a recipe URL:

<https://www.serious eats.com/pecan-pie-cheesecake-recipe-11843450>

Parsing recipe...

Successfully parsed recipe with 17 ingredients and 12 steps!

Initializing AI assistant...

=====

You can now ask questions about the recipe.

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Type 'quit', 'exit', or 'q' to exit.

=====

Your question: list all steps

Thinking...

Here are all the steps:

- Step 1: Adjust oven rack to middle position and preheat oven to 350°F (175°C).
- Step 2: Lightly grease a 9-inch springform pan with cooking spray.
- Step 3: Using aluminum foil, wrap bottom half of pan to create a waterproof seal.
- Step 4: In a medium bowl, stir together graham cracker crumbs, pecans, melted butter, 42 g (about 1 1/2 ounces; 3 tablespoons) brown sugar, and 1/2 teaspoon kosher salt until well combined.
- Step 5: Firmly press mixture into bottom and 1 1/2 to 2 inches up the sides of prepared springform pan.
- Step 6: Bake until lightly browned, about 10 minutes.
- Step 7: Transfer springform pan to a wire rack to cool completely, about 30 minutes.
- Step 8: Reduce oven temperature to 325°F (165°C).
- Step 9: In a large bowl with a hand mixer, or in the bowl of a stand mixer fitted with paddle attachment, beat cream cheese on medium speed until smooth, about 1 minute.
- Step 10: Add granulated sugar and 107 g (1/2 cup; 3 3/4 ounces) brown sugar.
- Step 11: Beat on medium-high speed until combined and smooth, about 1 minute.
- Step 12: Add eggs, one at a time, beating on low speed until just combined after each addition, stopping to scrape sides of bowl as needed.
- Step 13: Add sour cream, vanilla, and remaining 3/4 teaspoon kosher salt.
- Step 14: Beat on low speed until just combined, about 1 minute, stopping to scrape down sides of bowl as needed.
- Step 15: Pour cheesecake filling into cooled crust, gently smoothing top into an even layer using a small offset spatula or flexible rubber spatula.
- Step 16: Set springform pan in a roasting pan.
- Step 17: Place roasting pan in oven and fill with about 2 inches hot water.
- Step 18: Bake until the center of cheesecake jiggles slightly when shaken, about 1 1/2 hours.
- Step 19: Turn oven off, leave oven door ajar by about 4 inches, and let cheesecake cool inside oven for 1 hour.
- Step 20: Transfer cheesecake to wire rack and allow to cool completely, about 1 hour.
- Step 21: Refrigerate, uncovered, until fully chilled and set, at least 6 hours or up to 24 hours.
- Step 22: In a medium saucepan, bring sugar, cream, melted butter, corn syrup, and 1/4 teaspoon kosher salt to a simmer over medium heat, whisking occasionally.
- Step 23: Once simmering, stop whisking, and continue to simmer, undisturbed, over medium heat, until mixture becomes slightly darker and a candy thermometer registers 224°F (106°C), about 2 minutes.
- Step 24: Immediately remove from heat and use a flexible rubber spatula or wooden spoon to stir in pecans until coated.
- Step 25: Let cool to room temperature, stirring occasionally, about 30 minutes.
- Step 26: Carefully remove cheesecake from springform pan and transfer to serving plate.
- Step 27: Spoon cooled pecan pie topping over cheesecake.
- Step 28: Slice and serve.

ii)

Please enter a recipe URL:

<https://www.seriouseats.com/pecan-pie-cheesecake-recipe-11843450>

Parsing recipe...

Successfully parsed recipe with 17 ingredients and 12 steps!

Initializing AI assistant...

You can now ask questions about the recipe.

Try: 'start' to begin walkthrough, 'next', 'back', 'repeat', or ask any question!

Type 'quit', 'exit', or 'q' to exit.

Your question: list all the steps

Thinking...

Here are all the steps:

Step 1: Adjust oven rack to middle position and preheat oven to 350°F (175°C).

Step 2: Lightly grease a 9-inch springform pan with cooking spray.

Step 3: Using aluminum foil, wrap bottom half of pan to create a waterproof seal.

Step 4: In a medium bowl, stir together graham cracker crumbs, pecans, melted butter, 42 g (about 1 1/2 ounces; 3 tablespoons) brown sugar, and 1/2 teaspoon kosher salt until well combined.

Step 5: Firmly press mixture into bottom and 1 1/2 to 2 inches up the sides of prepared springform pan.

Step 6: Bake until lightly browned, about 10 minutes.

Step 7: Transfer springform pan to a wire rack to cool completely, about 30 minutes.

Step 8: Reduce oven temperature to 325°F (165°C).

Step 9: In a large bowl with a hand mixer, or in the bowl of a stand mixer fitted with paddle attachment, beat cream cheese on medium speed until smooth, about 1 minute.

Step 10: Add granulated sugar and 1/2 cup (3 3/4 ounces; 107 g) brown sugar.

Step 11: Beat on medium-high speed until combined and smooth, about 1 minute.

Step 12: Add eggs, one at a time, beating on low speed until just combined after each addition, stopping to scrape sides of bowl as needed.

Step 13: Add sour cream, vanilla, and remaining 3/4 teaspoon kosher salt.

Step 14: Beat on low speed until just combined, about 1 minute, stopping to scrape down sides of bowl as needed.

Step 15: Set aside.

Step 16: Pour cheesecake filling into cooled crust, gently smoothing top into an even layer using a small offset spatula or flexible rubber spatula.

Step 17: Set springform pan in a roasting pan.  
Step 18: Place roasting pan in oven and fill with about 2 inches hot water.  
Step 19: Bake until the center of cheesecake jiggles slightly when shaken, about 1 1/2 hours.  
Step 20: Turn oven off, leave oven door ajar by about 4 inches, and let cheesecake cool inside oven for 1 hour.  
Step 21: Transfer cheesecake to wire rack and allow to cool completely, about 1 hour.  
Step 22: Refrigerate, uncovered, until fully chilled and set, at least 6 hours or up to 24 hours.  
Step 23: In a medium saucepan, bring sugar, cream, melted butter, corn syrup, and 1/4 teaspoon kosher salt to a simmer over medium heat, whisking occasionally.  
Step 24: Once simmering, stop whisking, and continue to simmer, undisturbed, over medium heat, until mixture becomes slightly darker and a candy thermometer registers 224°F (106°C), about 2 minutes.  
Step 25: Immediately remove from heat and use a flexible rubber spatula or wooden spoon to stir in pecans until coated.  
Step 26: Let cool to room temperature, stirring occasionally, about 30 minutes.  
Step 27: Carefully remove cheesecake from springform pan and transfer to serving plate.  
Step 28: Spoon cooled pecan pie topping over cheesecake.  
Step 29: Slice and serve.

## 5) <https://www.serioouseats.com/pecan-pie-cheesecake-recipe-11843450>

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Please enter a recipe URL:

<https://www.serioouseats.com/pecan-pie-cheesecake-recipe-11843450>

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Initializing AI assistant...

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You can now ask questions about the recipe.

Try: 'start' to begin walkthrough, 'next', 'back', 'repeat', or ask any question!

Type 'quit', 'exit', or 'q' to exit.

=====

Your question: start

Thinking...

Step 1: Adjust oven rack to middle position and preheat oven to 350°F (175°C).

Step 2: Lightly grease a 9-inch springform pan with cooking spray.

Step 3: Using aluminum foil, wrap bottom half of pan to create a waterproof seal.

You can say 'next', 'back', or ask questions.

Your question: go to step 5

Thinking...

Step 5: Bake until lightly browned, about 10 minutes.

Step 6: Transfer springform pan to a wire rack to cool completely, about 30 minutes.

Step 7: Reduce oven temperature to 325°F (165°C).

You can say 'next', 'back', or ask questions.

Your question: back

Thinking...

Step 6: Transfer springform pan to a wire rack to cool completely, about 30 minutes.

Step 7: Reduce oven temperature to 325°F (165°C).

You can say 'next', 'back', or ask questions.

Your question: quit

Goodbye!

6) <https://www.allrecipes.com/recipe/218091/classic-and-simple-meat-lasagna/>

Welcome to the Recipe Assistant!

=====

Please enter a recipe URL:

<https://www.allrecipes.com/recipe/218091/classic-and-simple-meat-lasagna/>

Parsing recipe...

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Initializing AI assistant...

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Try: 'start' to begin walkthrough, 'next', 'back', 'repeat', or ask any question!

Type 'quit', 'exit', or 'q' to exit.

You can say 'next', 'back', or ask questions.

Your question: how do you preheat an oven

Thinking...

You can say 'next', 'back', or ask questions.

You can say 'next', 'back', or ask questions.

Your question: how do you preheat an oven

Thinking...

Preheating an oven means turning it on and letting it reach the desired temperature *\*before\** you put your food in. This ensures even cooking and the best results for most recipes.

To preheat your oven to 350°F (175°C), you'll typically:

1. Turn the oven dial or press the buttons to select the cooking mode (usually "Bake").
2. Set the temperature to 350°F (175°C).
3. The oven will then heat up. Many ovens have an indicator light or an audible beep to let you know when it has reached the set temperature.

You can find more detailed instructions for your specific oven model by searching online. Here's a helpful general guide:

[<https://www.youtube.com/watch?v=0h8t6f7rN9U>](<https://www.youtube.com/watch?v=0h8t6f7rN9U>)

We are currently on Step 1 of the recipe. You can say 'next', 'back', or ask more questions.

Your question: skip to the final step

Thinking...

The final step in this recipe is Step 6: "Bake in the preheated oven until the lasagna is bubbling and the cheese has melted, about 30 minutes. Remove foil and bake until cheese has begun to brown, about 10 more minutes. Allow to stand at least 10 minutes before serving."

Would you like to review this step, or should we go back to an earlier step?

Your question: q

Goodbye!

## Conversation Examples for AI (3)

1) AI model is able to generate answers that are found outside of the scraped information from the original website. Our original project 2 recipe chat did not have the means or database to store outside information that a user might have. Gemini is trained on more real world data so it is able to pull that information when asked, even if not present in the current recipe page. Here, the AI model is able to tell you how long an oven should be typically preheated for.

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Type 'quit', 'exit', or 'q' to exit.

=====

Your question: start

Thinking...

Step 1: Preheat the oven to 350 degrees F (175 degrees C).

You can say 'next', 'back', or ask questions.

Your question: how long should I preheat the oven for generally

Thinking...

The recipe doesn't specify a preheating time, but generally, you'll want to preheat your oven until the indicator light or tone signals that it has reached the set temperature. This usually takes about 10-15 minutes.

2) The AI model is able to describe in more depth the details in a specified instruction. Our original project 2 only sent out a youtube or google link to a "how to" or "what is" question which is not very specific and not very in depth. This involves the user to take the time to watch a video or read through a google search query. The AI model saves time by providing sufficient and specific details through text, reducing time wasted. This is because the AI is able to pull info from trained data. Below, the AI model is able to give information about what it means for the beef to be ready in terms of color and texture.

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You can now ask questions about the recipe.

Try: 'start' to begin walkthrough, 'next', 'back', 'repeat', or ask any question!

Type 'quit', 'exit', or 'q' to exit.

=====

Your question: start

Thinking...

Step 1: Preheat the oven to 350 degrees F (175 degrees C).

You can say 'next' to continue, 'back' to go to the previous step, or ask me any questions you might have.

Your question: next

Thinking...

Step 2: Bring a large pot of lightly salted water to a boil. Add lasagna noodles and cook for 10 minutes or until al dente; drain.

You can say 'next' to continue, 'back' to go to the previous step, or ask me any questions you might have.

Your question: next

Thinking...

Step 3: Meanwhile, place ground beef, garlic, oregano, garlic powder, salt, and black pepper in a large skillet over medium heat; cook and stir until beef is crumbly and evenly browned, about 10 minutes.

You can say 'next' to continue, 'back' to go to the previous step, or ask me any questions you might have.

Your question: how do I know that the beef is crumbly and browned enough. What does it look like exactly

Thinking...

The beef is crumbly and browned enough when it is no longer pink and has broken into small pieces. You'll see a uniform brown color throughout the ground beef.

Your question: how do I know right before its burnt

Thinking...

You'll know the beef is getting close to being burnt if you see parts of it starting to stick to the bottom of the pan excessively or if it starts to look very dry and dark brown, almost black, in some areas. It's also good to keep an eye out for any excessive smoking. The goal is a nice even brown.

3) The AI is able to detect a more diverse amount of tools as compared to our original chat system. Here, it detects that a bamboo mat is a tool for the recipe because it is trained on cooking data that details that as a cooking tool. It also is able to semantically understand that the bamboo mat was used for the purposes of cooking. Our original system wasn't able to do that. It also was able to give more detail on what the tools were doing to help in the process of cooking. Our system originally did not do that and just listed the detected tools.

4) In general, the AI system is able to take a wider variety of inputs and apply it to the interaction system. The previous system only had a certain set of exact instructions that it accepted. This is because the AI model has been trained on a wide variety of data with different instructions. In this example, the system takes in a variety of inputs (even another language: Malay) for the purposes of going next in the recipe.

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Initializing AI assistant...

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You can now ask questions about the recipe.

Try: 'start' to begin walkthrough, 'next', 'back', 'repeat', or ask any question!

Type 'quit', 'exit', or 'q' to exit.

=====

Your question: start

Thinking...

Step 1: Preheat the oven to 350 degrees F (175 degrees C).

You can say 'next' to move to the next step, 'back' to go to the previous step, or ask me any questions you have.

Your question: proceeding step

Thinking...

Step 2: Bring a large pot of lightly salted water to a boil.

You can say 'next' to move to the next step, 'back' to go to the previous step, or ask me any questions you have.

Your question: next step please

Thinking...

Step 3: Add lasagna noodles and cook for 10 minutes or until al dente; drain.

You can say 'next' to move to the next step, 'back' to go to the previous step, or ask me any questions you have.

Your question: what's after?

Thinking...

Step 4: Meanwhile, place ground beef, garlic, oregano, garlic powder, salt, and black pepper in a large skillet over medium heat; cook and stir until beef is crumbly and evenly browned, about 10 minutes.

You can say 'next' to move to the next step, 'back' to go to the previous step, or ask me any questions you have.

Your question: next next next

Thinking...

Step 5: Mix cottage cheese, Parmesan cheese, and eggs together in a large bowl until thoroughly combined.

You can say 'next' to move to the next step, 'back' to go to the previous step, or ask me any questions you have.

Your question: lepas itu?

Thinking...

Step 6: Lay 4 noodles side by side on the bottom of a 9x13-inch baking pan; top with a layer of prepared tomato-basil sauce, a layer of ground beef mixture, and a layer of cottage cheese mixture.

You can say 'next' to move to the next step, 'back' to go to the previous step, or ask me any questions you have.

Welcome to the Recipe Assistant!

=====

Please enter a recipe URL: <https://www.allrecipes.com/recipe/19511/smoked-salmon-sushi-roll/>

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Initializing AI assistant...

=====

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Try: 'start' to begin walkthrough, 'next', 'back', 'repeat', or ask any question!

Type 'quit', 'exit', or 'q' to exit.

=====

Your question: start

Thinking...

Step 1: Soak the rice for 4 hours.

You can say 'next' to move to the next step, 'back' to go to the previous step, or ask me any questions.

Your question: next

Thinking...

Step 2: Drain the rice.

Step 3: Cook the drained rice in a rice cooker with 2 cups of water.

You can say 'next' to move to the next step, 'back' to go to the previous step, or ask me any questions.

Your question: next

Thinking...

Step 4: Immediately after the rice is cooked, mix in the rice wine vinegar.

Step 5: Spread the rice on a plate until completely cool.

You can say 'next' to move to the next step, 'back' to go to the previous step, or ask me any questions.

Your question: next

Thinking...

Step 6: Place 1 sheet of seaweed on a bamboo mat.

Step 7: Press a thin layer of cool rice on the seaweed, leaving at least a 1/2 inch top and bottom edge of the seaweed uncovered.

You can say 'next' to move to the next step, 'back' to go to the previous step, or ask me any questions.

Your question: next

Thinking...

Step 8: Dot some wasabi on the rice.

Step 9: Arrange smoked salmon, cucumber, and avocado on the rice about 1 inch away from the bottom edge of the seaweed.

You can say 'next' to move to the next step, 'back' to go to the previous step, or ask me any questions.

Your question: next

Thinking...

Step 10: Slightly wet the top edge of the seaweed.

Step 11: Roll up tightly from the bottom to the top edge with the help of the bamboo mat. Cut salmon roll into 8 equal pieces and serve. Repeat for other rolls.

You can say 'next' to move to the next step, 'back' to go to the previous step, or ask me any questions.

Your question: what tools are in step 11

Thinking...

Step 11 mentions using a bamboo mat to help roll the sushi.

## Conversation Examples against AI (3)

1) When atomizing steps, the AI is very inconsistent with what steps it atomizes if you run it on the same recipe. This is because there is always an element of randomness with AI models when it is trying to analyze and generate the new atomized steps. The previous system used regex which is always consistent. This allows the same recipe to be read the same by different people in different runs. In this example, it generates 28 steps then 29 steps for the same recipe.

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<https://www.seriousseats.com/pecan-pie-cheesecake-recipe-11843450>

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=====

Your question: list all steps

Thinking...

Here are all the steps:

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- Step 15: Pour cheesecake filling into cooled crust, gently smoothing top into an even layer using a small offset spatula or flexible rubber spatula.
- Step 16: Set springform pan in a roasting pan.
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- Step 18: Bake until the center of cheesecake jiggles slightly when shaken, about 1 1/2 hours.
- Step 19: Turn oven off, leave oven door ajar by about 4 inches, and let cheesecake cool inside oven for 1 hour.
- Step 20: Transfer cheesecake to wire rack and allow to cool completely, about 1 hour.
- Step 21: Refrigerate, uncovered, until fully chilled and set, at least 6 hours or up to 24 hours.
- Step 22: In a medium saucepan, bring sugar, cream, melted butter, corn syrup, and 1/4 teaspoon kosher salt to a simmer over medium heat, whisking occasionally.
- Step 23: Once simmering, stop whisking, and continue to simmer, undisturbed, over medium heat, until mixture becomes slightly darker and a candy thermometer registers 224°F (106°C), about 2 minutes.

Step 24: Immediately remove from heat and use a flexible rubber spatula or wooden spoon to stir in pecans until coated.

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Step 26: Carefully remove cheesecake from springform pan and transfer to serving plate.

Step 27: Spoon cooled pecan pie topping over cheesecake.

Step 28: Slice and serve.

ii)

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Parsing recipe...

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You can now ask questions about the recipe.

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Type 'quit', 'exit', or 'q' to exit.

Your question: list all the steps

Thinking...

Here are all the steps:

Step 1: Adjust oven rack to middle position and preheat oven to 350°F (175°C).

Step 2: Lightly grease a 9-inch springform pan with cooking spray.

Step 3: Using aluminum foil, wrap bottom half of pan to create a waterproof seal.

Step 4: In a medium bowl, stir together graham cracker crumbs, pecans, melted butter, 42 g (about 1 1/2 ounces; 3 tablespoons) brown sugar, and 1/2 teaspoon kosher salt until well combined.

Step 5: Firmly press mixture into bottom and 1 1/2 to 2 inches up the sides of prepared springform pan.

Step 6: Bake until lightly browned, about 10 minutes.

Step 7: Transfer springform pan to a wire rack to cool completely, about 30 minutes.

Step 8: Reduce oven temperature to 325°F (165°C).

Step 9: In a large bowl with a hand mixer, or in the bowl of a stand mixer fitted with paddle attachment, beat cream cheese on medium speed until smooth, about 1 minute.

Step 10: Add granulated sugar and 1/2 cup (3 3/4 ounces; 107 g) brown sugar.

Step 11: Beat on medium-high speed until combined and smooth, about 1 minute.

Step 12: Add eggs, one at a time, beating on low speed until just combined after each addition, stopping to scrape sides of bowl as needed.

Step 13: Add sour cream, vanilla, and remaining 3/4 teaspoon kosher salt.

Step 14: Beat on low speed until just combined, about 1 minute, stopping to scrape down sides of bowl as needed.

Step 15: Set aside.

Step 16: Pour cheesecake filling into cooled crust, gently smoothing top into an even layer using a small offset spatula or flexible rubber spatula.

Step 17: Set springform pan in a roasting pan.

Step 18: Place roasting pan in oven and fill with about 2 inches hot water.

Step 19: Bake until the center of cheesecake jiggles slightly when shaken, about 1 1/2 hours.

Step 20: Turn oven off, leave oven door ajar by about 4 inches, and let cheesecake cool inside oven for 1 hour.

Step 21: Transfer cheesecake to wire rack and allow to cool completely, about 1 hour.

Step 22: Refrigerate, uncovered, until fully chilled and set, at least 6 hours or up to 24 hours.

Step 23: In a medium saucepan, bring sugar, cream, melted butter, corn syrup, and 1/4 teaspoon kosher salt to a simmer over medium heat, whisking occasionally.

Step 24: Once simmering, stop whisking, and continue to simmer, undisturbed, over medium heat, until mixture becomes slightly darker and a candy thermometer registers 224°F (106°C), about 2 minutes.

Step 25: Immediately remove from heat and use a flexible rubber spatula or wooden spoon to stir in pecans until coated.

Step 26: Let cool to room temperature, stirring occasionally, about 30 minutes.

Step 27: Carefully remove cheesecake from springform pan and transfer to serving plate.

Step 28: Spoon cooled pecan pie topping over cheesecake.

Step 29: Slice and serve.

2) The LLM sometimes gets confused with what steps it is showing and what steps it is on when navigating. In this example, it shows multiple steps at a time. It then gets confused when I say “back” when on step 5. Instead, it shows the next steps, steps 6 and 7. This is because the LLM follows chat history and doesn’t explicitly store what state we are in, unlike our original system.

Please enter a recipe URL:

<https://www.seriouseats.com/pecan-pie-cheesecake-recipe-11843450>

Parsing recipe...

Successfully parsed recipe with 17 ingredients and 12 steps!

Initializing AI assistant...

=====

You can now ask questions about the recipe.  
Try: 'start' to begin walkthrough, 'next', 'back', 'repeat', or ask any question!  
Type 'quit', 'exit', or 'q' to exit.

=====

Your question: start

Thinking...

Step 1: Adjust oven rack to middle position and preheat oven to 350°F (175°C).  
Step 2: Lightly grease a 9-inch springform pan with cooking spray.  
Step 3: Using aluminum foil, wrap bottom half of pan to create a waterproof seal.

You can say 'next', 'back', or ask questions.

Your question: go to step 5

Thinking...

Step 5: Bake until lightly browned, about 10 minutes.  
Step 6: Transfer springform pan to a wire rack to cool completely, about 30 minutes.  
Step 7: Reduce oven temperature to 325°F (165°C).

You can say 'next', 'back', or ask questions.

Your question: back

Thinking...

Step 6: Transfer springform pan to a wire rack to cool completely, about 30 minutes.  
Step 7: Reduce oven temperature to 325°F (165°C).

You can say 'next', 'back', or ask questions.

Your question: quit

Goodbye!

3) The AI Model does not use its atomized steps until after atomized steps are listed. It creates for a very inconsistent step walkthrough. Here in i), you can see that it sees Step 6 as the final step. In ii), after asking for the full atomized step list, it now uses step 8 as the final step. This is because the LLM does not store the atomized steps.

i)

Welcome to the Recipe Assistant!

=====

Please enter a recipe URL:

<https://www.allrecipes.com/recipe/218091/classic-and-simple-meat-lasagna/>

Parsing recipe...

Successfully parsed recipe with 12 ingredients and 6 steps!

Initializing AI assistant...

=====

You can now ask questions about the recipe.

Try: 'start' to begin walkthrough, 'next', 'back', 'repeat', or ask any question!

Type 'quit', 'exit', or 'q' to exit.

=====

Your question: show me the final step

Thinking...

Step 6: Bake in the preheated oven until the lasagna is bubbling and the cheese has melted, about 30 minutes. Remove foil and bake until cheese has begun to brown, about 10 more minutes. Allow to stand at least 10 minutes before serving.

You can say 'next', 'back', or ask questions.

ii)

Welcome to the Recipe Assistant!

=====

Please enter a recipe URL:

<https://www.allrecipes.com/recipe/218091/classic-and-simple-meat-lasagna/>

Parsing recipe...

Successfully parsed recipe with 12 ingredients and 6 steps!

Initializing AI assistant...

You can now ask questions about the recipe.

Try: 'start' to begin walkthrough, 'next', 'back', 'repeat', or ask any question!

Type 'quit', 'exit', or 'q' to exit.

Your question: show all the steps

Thinking...

Here are all the steps for the lasagna recipe:

**Step 1:** Preheat the oven to 350 degrees F (175 degrees C).

**Step 2:** Bring a large pot of lightly salted water to a boil. Add lasagna noodles and cook for 10 minutes or until al dente; drain.

**Step 3:** Meanwhile, place ground beef, garlic, oregano, garlic powder, salt, and black pepper in a large skillet over medium heat; cook and stir until beef is crumbly and evenly browned, about 10 minutes.

**Step 4:** Mix cottage cheese, Parmesan cheese, and eggs together in a large bowl until thoroughly combined.

**Step 5:** Lay 4 noodles side by side on the bottom of a 9x13-inch baking pan.

**Step 6:** Top the noodles with a layer of prepared tomato-basil sauce, a layer of ground beef mixture, and a layer of cottage cheese mixture.

**Step 7:** Repeat layers twice more, ending with a layer of sauce; sprinkle mozzarella cheese on top. Cover the dish with aluminum foil.

**Step 8:** Bake in the preheated oven until the lasagna is bubbling and the cheese has melted, about 30 minutes. Remove foil and bake until cheese has begun to brown, about 10 more minutes. Allow to stand at least 10 minutes before serving.

Your question: start

Thinking...

**Step 1:** Preheat the oven to 350 degrees F (175 degrees C).

You can say 'next' to move to the next step, 'back' to go to the previous step, or ask me any questions you have.

Your question: show me the final step

Thinking...

The final step is \*\*Step 8:\*\* Bake in the preheated oven until the lasagna is bubbling and the cheese has melted, about 30 minutes. Remove foil and bake until cheese has begun to brown, about 10 more minutes. Allow to stand at least 10 minutes before serving.

4) The AI Model gives dead youtube or google links. Here, the youtube guide link does not even exist anymore. The model is trained on older data and is not up to date with links that are current. It is also unable (due to website blockers, etc.) to click on the link itself to check if it's still alive.

Welcome to the Recipe Assistant!

=====

Please enter a recipe URL:

<https://www.allrecipes.com/recipe/218091/classic-and-simple-meat-lasagna/>

Parsing recipe...

Successfully parsed recipe with 12 ingredients and 6 steps!

Initializing AI assistant...

=====

You can now ask questions about the recipe.

Try: 'start' to begin walkthrough, 'next', 'back', 'repeat', or ask any question!

Type 'quit', 'exit', or 'q' to exit.

=====

You can say 'next', 'back', or ask questions.

Your question: how do you preheat an oven

Thinking...

You can say 'next', 'back', or ask questions.

You can say 'next', 'back', or ask questions.

Your question: how do you preheat an oven

Thinking...

audible beep to let you know when it has reached the set temperature.

You can find more detailed instructions for your specific oven model by searching online. Here's a helpful general guide:

[<https://www.youtube.com/watch?v=0h8t6f7rN9U>](<https://www.youtube.com/watch?v=0h8t6f7rN9U>)

We are currently on Step 1 of the recipe. You can say 'next', 'back', or ask more questions.

5) Something that I can't test right now is that the LLM can run out of tokens if I use it long enough which is dangerous. Let's say you're in the middle of cooking something on a hot stove. If the LLM stops midway, you might not know what to do and do something that starts a fire.